



**Region 2 Enforcement & Compliance Assurance Division
Air Compliance Branch**

CAA Inspection Report

Inspection Date: 9/13/2022
Facility Name: FLEURCHEM
Facility Address: 33 SPRAGUE AVENUE, MIDDLETOWN, NY 10940
ICIS-Air ID #: NY0000003330900057
Facility Contact: Anne Casullo, EHS manager, Ann.Casullo@fleurchem.com
EPA Lead Inspector: Phillip Ritz, Environmental Scientist; ritz.phillip@epa.gov
EPA Asst. Inspector: Richard Kan, Environmental Engineer
State Inspector(s): Andrew Chin and Dylan Kahlstorf, NYSDEC Inspectors

Pertinent Regulatory Requirements

- There are 31 emission points associated with this process subject to 6 NYCRR Part 212 that require air cleaning as high as 90%. This regulatory limit is achieved by the operation of condenser recovery units which are designed to achieve greater than 99% recovery. Rule 6 NYCRR Subpart 212 also has an applicable particulate matter standard of 0.05 grains per dry standard cubic foot as well as a limited opacity.
- Facility heating requirements are supported by the operation of a 5 MMBtu/hr high pressure natural gas-fired boiler. This unit is exempt pursuant to 6 NYCRR Subpart 201-3.2(c)(1). There are two permitted boilers above 10 MMBtu/hr that produce steam and aid in the production of the flavors. These account for the two (2) emission points subject to 6 NYCRR Subpart 227, Stationary Combustion Installations. Natural gas is the primary fuel with No. 4 fuel oil as a backup. Sulfur in fuel content shall not exceed the maximum limit of 1.5%.
- Fume and lab hoods located on site for quality control are exempt in accordance with 6 NYCRR Subpart 201-3.2(c)(40)

Summary of Observations

- Fleurchem, Inc makes natural flavor ingredients for consumer products. The facility uses materials like natural oils which are vacuum distilled to make products like esters and ketones. They also make some synthetic flavors.
- The facility uses kettles to combine ingredients and stills for refining and purification.
- Condensers control emissions to capture volatile organics and reuse them.

EPA inspectors arrived at the facility at 9:20 AM and walked the public roads around the perimeter of the facility. At 9:30 AM EPA inspectors entered the facility and signed in before starting the opening conference. The attendees were Dylan Kahlstorf and Andrew Chin from NYSDEC, and Ms. Anne Casullo, the EHS manager. We mentioned the visit was a follow up to the 2021 GMAP monitoring by EPA, and neighborhood complaints about odors. We spoke about the current minor source permit for the facility.

Operations at this location began under another owner in 1890, and over time, the previous owner added on new manufacturing buildings. The previous owner processed oil before a new owner, Hercules, switched to manufacturing flavors and fragrances. Hercules moved operations to Mexico and closed the facility in Middletown. Fleurchem took over the facility in the 1990s to create its own company with about 50 employees. The facility operates Monday to Friday with two 12-hour shifts a day. Larry Costea is the plant manager.

Raw material (55-gallon drums, barrels, containers) arrives by truck (typically FedEx) there is no more rail delivery (rail was removed and turned into rails to trails). Solids, liquids, and powders are dispensed depending on the rate of orders, and how the materials will be shipped out. Processing includes mixing and blending in reactors and silos. The distillation of essential oils is a large part of facility production.

The facility said a low volume of materials with a “high odor content” are processed, as mostly fractional distillation is used to isolate compounds under vacuum. Waste residue is shipped out in drums.

The finished product, specialty flavorings, is shipped globally. The most popular product is butter flavor. Part of the warehouse area is refrigerated.

EPA Inspectors and facility representatives went on a facility walkthrough at 11 AM.

The facility representative said they reduced odors by adding a taller stack, carbon trays, and using smaller containers when possible. The carbon trays and canisters are changed monthly. Maintenance and chemical engineering maintain the carbon canisters. Ingredients are melted in hot boxes with carbon filtration on the exhaust gas.

The buildings exhaust to the atmosphere. EPA inspectors saw windows open to the atmosphere for ventilation - there is no negative pressure.

Walking to the boiler rooms, the boilers burn gas or No. 2 fuel oil for facility and product heating, with high pressure steam vented to the roof. A 1986 Clever Brooks boiler burns natural gas most of the time. A second Powermaster 1956 boiler burns oil a few days a year during natural gas outages or high prices.

We spoke with the facility representative about odors. Odors depend on the concentration of high impact ingredients used for meat flavor, mercaptans, and sulphur compounds. The facility stores odorous ingredients in one closed room. Temperature inversions and open windows can cause odor issues. The facility representative said ventilation meets OSHA standards. The odor high impact room is F-008 BL-XP while room B-005 F is for Acetone area. We noticed the XP room is cooler to keep vapor pressure down. There is a separate carbon filter for the room.

Walking to the warehouse area we saw acetone in 5-gallon buckets. The hot box is furo bulk tank repackaging. EPA inspectors then visited the hazardous waste area with byproducts from manufacturing and expired products.

We saw running water and was told that the cooling process has a SPDES permit for well water. The drained water tank goes to the local MSW.

We toured the exterior of the facility before returning to the conference room for a closing conference. We spoke about the relation with neighbors over issues and odor complaints. We requested records of potential to emit calculations, and the minor source permit for low VOC, odors. We ended the inspection at 12:45 PM.

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11/14/2022

X Phillip Ritz

Lead Inspector

Signed by: PHILLIP RITZ

Assisting Inspector's Name: Richard Kan

11/14/2022

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Signed by: RICHARD KAN

Supervisor's Name: Nancy Rutherford

11/14/2022

X Harish Patel

Supervisor

Signed by: Environmental Protection Agency